DOCUMENT RESUME

ED 116 378 EC 080 749

AUTHOR Crouse, Robert J.; Kappan, David L.
TITLE Development of a Prototype Training Program for Teachers of the Visually Handicapped, Orientation and Mobility; Final Report of Special Projects.
INSTITUTION University of Northern Colorado, Greeley. School of Special Education and Rehabilitation.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE Aug 75
GRANT OEG-0-9-151298; OEG-0-71-3606
NOTE 52p.

EDRS PRICE MF-$0.76 HC-$3.32 Plus Postage
DESCRIPTORS Elementary Secondary Education; Exceptional Child Education; *Program Descriptions; *Program Development; Public Schools; Rural Education; *Teacher Education; *Visually Handicapped; *Visually Handicapped Mobility

ABSTRACT

Described is the 4-year development of a prototype program to train teachers competent in both the academic areas related to the visually handicapped and in orientation and mobility. Teachers with dual competencies were needed to fulfill the educational needs of visually handicapped children in public day school programs in rural, sparsely populated areas. The major portion of the document consists of a detailed discussion of three phases of program development (planning, a pilot model, and a prototype model) and includes lists of competencies and course requirements and results of program evaluation after each phase. Also included are a summary of the current employment status of 22 program graduates and brief descriptions of the 22 final prototype courses. (LS)

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ED116378

Final Report of Special Projects:

DEVELOPMENT OF A PROTOTYPE TRAINING PROGRAM FOR TEACHERS OF THE VISUALLY HANDICAPPED, ORIENTATION AND MOBILITY

OEG-0-9-151288
OEG-0-71-3606

Project Directors

ROBERT J. CROUSE
DAVID L. KAPPAN

UNIVERSITY OF NORTHERN COLORADO

School of Special Education and Rehabilitation

College of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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August, 1975

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INTRODUCTION

This report is a summary of the procedures and results of four special project grants from the U. S. Office of Education, Bureau of Education for the Handicapped undertaken by the University of Northern Colorado School of Special Education and Rehabilitation, Department of Communication Disorders, Area of the Visually Handicapped.

The special projects were initiated in September, 1969 and terminated August 31, 1973. The purpose of the special projects was to develop a teacher training model for teachers of the visually handicapped who would possess full and equal skills in both the academic areas related to the visually handicapped and instruction of orientation and mobility skills to school age visually handicapped children.

This concept of preparing teachers of the visually handicapped with full and equal competencies was developed and implemented by Dr. Grace D. Napier, Professor and Coordinator for the Area of the Visually Handicapped at the University of Northern Colorado.

The rationale for combining the teaching of academic related skills with teaching skills in orientation and mobility was to prepare a teacher who could fulfill the composite educational needs of visually handicapped children

enrolled in public day school programs. Colorado, like many of its surrounding states, is primarily rural in nature and sparsely populated. The majority of public day school programs serving the visually handicapped in the Rocky Mountain and High Plains Regions are small in pupil enrollment and spread out over large geographical areas. The itinerant teacher plan is the most prevelant program of rendering services to visually handicapped children in the public day school programs. The typical itinerant program for the visually handicapped in these regions only has sufficient pupil enrollment to support the services of one teacher of the visually handicapped. The typical one-teacher itinerant program in this region serves a wide age range of children usually from the early elementary grades through senior high school.

In 1968 and 1969, Dr. Grace D. Napier noted that none of the teachers of the visually handicapped in Colorado was qualified to teach formalized orientation and mobility skills to school age blind children. In fact, at that time there was not one certified orientation and mobility instructor employed anywhere in the state. Children were either receiving no instruction in mobility at all or were being taught these skills by teachers untrained in this area. Yet, few school districts had sufficient pupil enrollment to justify the employment of both a teacher of the visually handicapped and an orientation and mobility specialist. Therefore, Dr. Napier

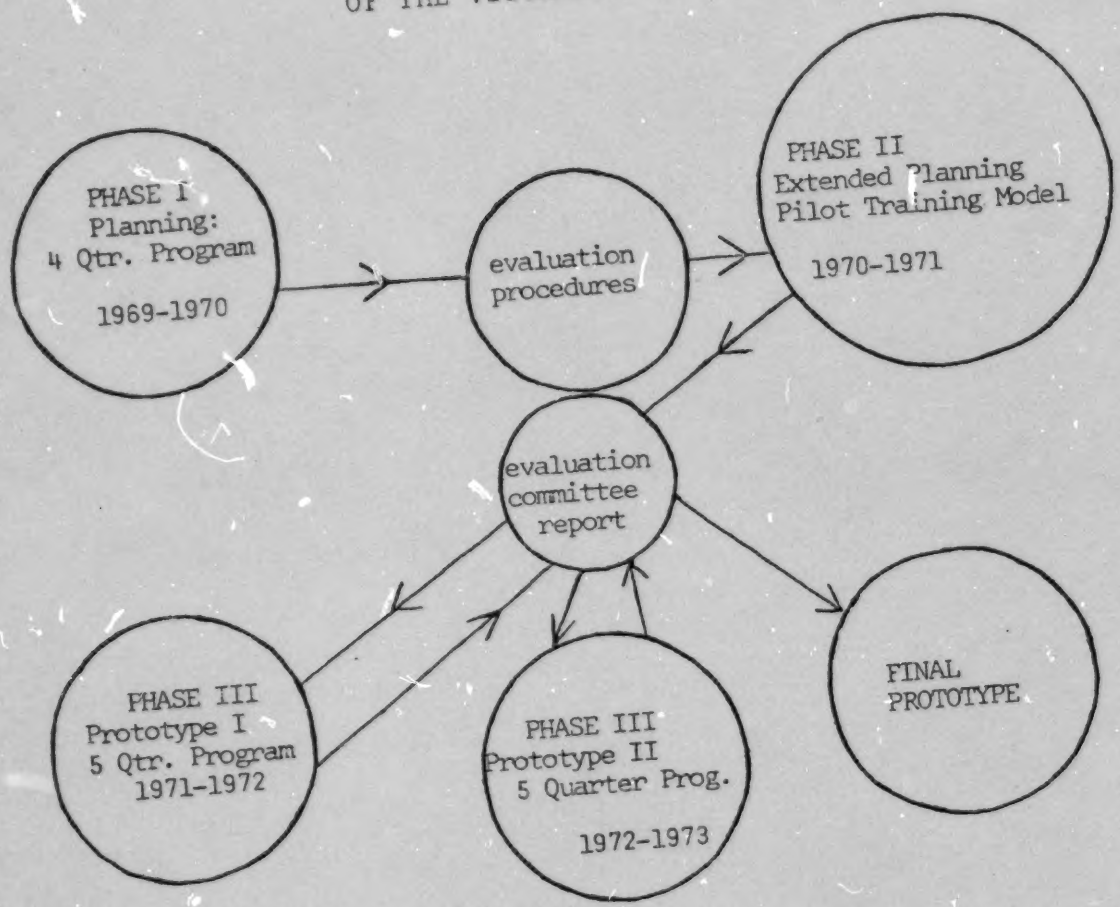
applied for and received a special grant to prepare dually certified teachers of the visually handicapped who would be trained and qualified to teach full orientation and mobility techniques in addition to being fully trained as a teacher of the visually handicapped. The goal for the preparation of the dual-competency teacher of the visually handicapped was to place these graduates in visually handicapped programs in this region where they could utilize both skills.

The training model for dual-competency teachers of the visually handicapped was developed in three phases over a period of four years. First, a planning phase was implemented to investigate the possibilities of curriculum design in order to fully prepare one teacher in both areas. The second phase included an extension of planning activities and implemented a Pilot Training Model by which four graduate students were trained as dual-competency teachers in four academic quarters of study.

The third phase of program development involved the implementation and evaluation of two prototype training models over a period of two years. Both of the prototype training models were five academic quarters (15 months) in length. An evaluation by an outside team of consultants was completed at the end of the pilot model and the two prototype training models. Figure 1 represents the flow of the program development via the special projects from planning phase through

FIGURE I

FLOW CHART FOR DEVELOPMENT OF A TRAINING MODEL
FOR DUAL-COMPETENCY TEACHERS
OF THE VISUALLY HANDICAPPED



to the completion of the final prototype training model.

PHASE I

Planning

A project director, Mr. Robert Crouse was hired to develop the detailed plans for implementing the proposal for training dual-competency teachers. Mr. Crouse had prior experience both as an orientation and mobility instructor and as an administrator of a training program in orientation and mobility.

The first phase in the development of the training model for preparation of teachers of the visually handicapped for sparsely populated areas involved an assessment of the present situation in the public school of the region and services rendered to visually handicapped children. Additional aspects in the planning stage were observation of training programs at other universities and use of consulting authorities in the teacher training field. The final stages of the planning process involved design of a curriculum to prepare dual-competency teachers of the visually handicapped and the formulation of specific evaluation procedures in order to assess the efficiency of the training model.

A survey was conducted as to the extent of orientation and mobility services rendered visually handicapped school-age children in Colorado and eleven surrounding states in the Rocky Mountain and High Plains Regions (see Table 1). Only

TABLE 1

SURVEY OF ORIENTATION AND MOBILITY SERVICES IN COLORADO AND SURROUNDING STATES - 1969

States Reporting:

Arizona	Montana	Oklahoma
Colorado	Nebraska	South Dakota
Idaho	New Mexico	Utah
Kansas	North Dakota	Wyoming

Orientation and Mobility Services and School Enrollment of Blind and Partially Seeing Children:

State	Professionally Trained O. & M. Teachers			Untrained O. & M. Teachers			Residential School Enrollment	Day School Enrollment	Total School Enrollment
	Day School	Residen. School	Adult Agency	Day School	Residen. School	Adult Agency			
Arizona			1		1		125	73	198
Colorado		2	1	3			83	110	193
Idaho					2		31	12	43
Kansas	1						148	100	248
Montana			1				24	90	114
Nebraska					2		62	123	185
New Mexico		1					130	none	130
North Dakota			1*				37	7	44
Oklahoma					2		122	67	189
South Dakota		1*					50	1	51
Utah		1					76	104	180
Wyoming							none	125	125
TOTALS	1	5	4	3	7	unr.	888	812	1,700

* Part-time with children

five trained orientation and mobility instructors were found to be working with school age children, all five being employed at residential schools. No trained orientation and mobility specialists were reported to be working on a full-time basis in the public school districts in the twelve states surveyed.

The target area for this prototype program was the public schools. The objectives of the training program was to train teachers who had full and equal competencies in both teaching academic subjects and orientation and mobility skills to visually handicapped students.

The project director visited and observed three universities which had orientation and mobility training programs. They were: Western Michigan University, California State University at Los Angeles, and San Francisco State University. The latter two universities also had regular teacher training programs for preparation of teachers of the visually handicapped. These universities were most gracious in sharing their knowledge in the teacher preparation field and extended valuable advice in the design of a new program that would include training in both mobility and academics.

Conferences were held on the local level with the Consultant for Visually Handicapped Colorado State Department of Education, supervising teachers from the Denver Public Schools, and several itinerant and resource teachers of the visually handicapped who were working in public day school

programs in Colorado. Two visits were made to the Colorado School for the Deaf and Blind.

The project director attended two Special Institutes for teacher preparation personnel and two professional conferences for educators of the visually handicapped and workers for the blind.

Plans for the design of the curriculum were formulated in part by the observation visits, consultations with teachers, and consultations with university faculty in the area of special education. The area coordinator and project director also reviewed the existing university courses in the area of the visually handicapped and other courses in special education in order to draft the curriculum for the first group of dual-competency teacher trainees.

The four quarter graduate level curriculum was designed as follows:

FIRST QUARTER

EDSE 300	Introduction to Graduate Study
EDSE 240	Survey of Education of Visually Handicapped
EDSE 243	Beginning Braille
EDSE 244	Elementary Methods for the Blind
EDSE 302	Education and Psychology of Exceptional Children
ID 322	Independent Study: Independence in Mobility
EDSE 345	Principles of Orientation and Mobility for the Blind

SECOND QUARTER

EDSE 102	Counseling Parents of Exceptional Children
EDSE 242	Principles of Education of the Partially Seeing
EDSE 306	Principles and Practices of Measurement of the Handicapped
EDSE 341	Structure and Function of the Eye
EDSE 343	Advanced Braille
ID 301	Practicum: Advanced Mobility (mini-practicum)

THIRD QUARTER

EDSE 344 Practicum: With Visually Handicapped (with an emphasis on teaching academics)
EDSE 245 Secondary Methods for the Blind
EDSE 346 Multi-Impaired Blind Child

FOURTH QUARTER

EDSE 344 Practicum: With Visually Handicapped (with an emphasis on teaching orientation and mobility)

Design for Evaluation of the Program

Several authorities in the field of the visually handicapped were contracted to make up an Evaluation Committee which set up procedures to evaluate the progress and efficiency of the dual-competency program. The Evaluation Committee was responsible for setting up all of the evaluation procedures and did an on-site evaluation of the various training models developed during the special projects.

The evaluation objectives and procedures were as follow:

A. Objective Measures

1. Use of mobility skills check list for instructors to be completed after the quarter in which student participates in the occlusion experiences.
2. Letter grades received in course work.
3. Comprehensive written examination at beginning of fourth or last quarter of study, which will be completed before on-site visit.
4. Completion of evaluation using competencies list (see pg. 11) to measure the extent the program has met declared objectives and goals. Delineation of deficiencies and recommendations for revision.

B. Subjective and Objective Measures

1. Information to be sent to evaluation team prior to on-site visit:

   a. Background information on university student, including undergraduate degree area(s), work experience, grades to date in graduate study.

   b. Evaluation by supervising teacher of student teacher's performance during first practicum.

   c. Written evaluation by student of the program including his progress and role in relationship to the training program.

   d. Written evaluation of the student by university faculty.

   e. A description of the student's work schedule including the following:

      1) Age range and number of students with whom he is working

      2) Basic educational, social, and medical history of each visually handicapped child

      3) Time ratio spent in both classroom and mobility training

2. Information that will be available during two-day, on-site observation:

   a. Weekly progress notes delineating teaching procedures with each blind child for both classroom and mobility areas.

   b. Student will also submit on a volunteer basis a selction of video tape sequences depicting his performance with emphasis on his growth as a teacher.

3. Procedures to be used during on-site visit:

   a. Observation of each participating student teacher.

   b. Review of daily progress notes and records.

   c. Viewing of selected video tapes to depict student teacher's growth.

   d. Discussions with supervising teachers and administration.

e. The committee will interview each student individually to evaluate the extent of his knowledge which was obtained as a direct or indirect result of the training program; this evaluation will not be designed to evaluate the student per se or in any way affect his progress or position in the program.

f. A survey of the recipients will be conducted in an indirect manner to identify the rapport and working relationship between blind child or youth and student instructor.

g. Summarization of foregoing procedures, formulation of evaluation report, recommendations for revision, extension, and deletion of program aspects.

Competency List

The Pilot Training Model has been specifically designed to prepare the dual-competency teacher to obtain the following competencies in the various skill areas that will be taught directly to visually handicapped children. In addition, knowledge is needed by the teacher to develop professional understanding of the field. The items are not listed in any preferrential or chronological order.

The evaluation committee will use a yes/no response method when they complete the on-site evaluation, recommending changes and weaknesses on negative responses. Their purpose is to determine whether or not the program has achieved its intended objectives. When the competency list is sent to graduates working in the field, they will be asked to weigh each item in their responses as to their applicability in teaching situations.

1. General Educational and Teaching Knowledge

   1.1 A knowledge of the medical, emotional, psychological, social, and educational implications of blindness.

   1.2 Knowledge of anatomy and physicology of the eye and dynamics of residual vision.

1.3 Ability to interpret medical, audiological, psychological, and social data and reports.

1.4 Ability to maintain and utilize cumulative records.

1.5 Be able to interpret to other teachers, supervisors, and administrators organizational procedures for education of visually handicapped children.

1.6 Ability to organize curricula, adapt materials, use special equipment, to meet individual needs of blind children for the purpose of enabling them to compete equally with sighted children in regular classes.

1.7 A knowledge of the use, limitations, interpretation, and administration of individual and group tests of intelligence to visually handicapped children.

1.8 Knowledge of services rendered blind children and their parents by local regional and national organizations.

1.9 Ability to interpret special educational programs for, and the problems and abilities of visually handicapped to other educational personnel and the general public.

2. Academic Subjects

The ability to

2.1 develop an understanding of number concepts and use of equipment and skills for computation.

2.2 provide experiences to aid in the development of language arts.

2.3 initiate curriculum experiences that will include development of knowledge in art, music, and crafts.

2.4 aid children in developing skills in health education and physical education, including consultation with regular classroom teachers.

2.5 aid children in participating in recreational activities.

2.6 provide supplementary curriculum experiences in social studies including government, economics, and sociology.

2.7 design, adapt, and aid learning of science.

2.8 to use methods and adapt materials and use of special equipment that will supplement learning taking place in the child's regular classroom.

3. Communication

The ability to

3.1 teach the blind child writing and reading of braille.

3.2 teach use of the brailler, slate, and stylus.

3.3 help the child obtain ability in touch typewriting.

3.4 aid child in learning use of talking book, tape recorders, and cassettes.

3.5 teach knowledge and skills of script writing.

3.6 aid child in development of listening skills.

3.7 help child to learn effective oral expression including enuciation and pronunciation.

3.8 provide curriculum experiences in dramatic arts, role playing, public speaking.

3.9 provide knowledge and develop abilities in written communication including style, form, clarity and correct usage of the English language.

3.10 teach communicative skills to the partially seeing child, including reading.

4. Social and Personal Adjustment

The ability to

4.1 help child with respect to his social problems and social adjustment.

4.2 aid child in development of a healthy self-image.

4.3 aid child in development of tolerance and understanding of others in interpersonal relations

4.4 help child obtain a realistic outlook as to vocational goals including occupational information, pre-vocational experiences, and use of vocational referral sources.

4.5 recognize severe emotional problems and knowledge of proper referral sources.

4.6 interpret blind child to parents and help them understand and appreciate him.

5. Sensory Training

The ability to

5.1 help child utilize auditory skills for orientation and mobility.

5.2 develop effective tactual awareness.

5.3 aid child in olfactory and gustatory discrimination.

5.4 teach motor coordination skills including limb and body awareness and locomotion.

5.5 help child develop skillful perceptual awareness of his environment using the sensorium.

5.6 aid the development of spatial orientation, both static and dynamic.

5.7 help child develop good postural habits.

5.8 aid in development of good balance and kinesthetic awareness.

6. Orientation and Mobility

6.1 Ability to teach child the use of remaining senses to optimal efficiency.

6.2 Teach child to travel independently as possible with maximum safety, efficiency, and grace.

6.3 Instruct severely visually handicapped child in methods and techniques of the long cane or Hoover system.

6.4 Teach residual or low vision children maximum effectiveness in the use of remaining vision for travel, with or without any mobility device.

7. Professional Development

7.1 Knowledge and use of professional journals, literature and reference materials on educational developments for the visually handicapped.

7.2 Ability to express self verbally.

7.3 Ability to recognize good and bad research in education, psychology, and special education.

7.4 Knowledge and understanding of professional organizations such as CEC, AEVH, and AAWB.

7.5 Knowledge of educational programs for both regular children and handicapped children of various types.

8. Activities of Daily Living

The ability to

8.1 teach knowledge and methods of personal hygiene.

8.2 aid child in development of good personal grooming skills.

8.3 help child develop proper eating skills including manipulation of utensils, table etiquette.

8.4 teach child proper selection, care and maintenance of clothing, footwear, and personal items.

8.5 teach child effective home management skills such as nutrition, food preparation, housekeeping.

8.6 aid child in knowledge of good eye care, management of occular prothesis.

PHASE II

The Pilot Training Model

Four graduate students were selected to participate in the Pilot Training Model beginning September 1970 through August 1971. Three of the students had previous teaching experience and the fourth had prior work experience as a registered nurse.

The minimum admission requirements used to select the students were:

1. The applicant must have met all of the requirements for admission to the Graduate School of the University.
2. Hold a baccalaureate degree from an accredited college or university.
3. Undergraduate grade point average of at least 2.5 or better.

The faculty in the area of visually handicapped, Dr. Grace Napier and Mr. Robert Crouse, placed heavy emphasis upon the following items in selecting students for the program:

1. Undergraduate major in education or special education.
2. Previous teaching experience in either special education, elementary education, or secondary education.
3. Personal interview with the applicant.
4. Personal references from former employers.

The four dual competency students represented a third of the total number of students in the visually handicapped

teacher training M.A. program. Course work in visually handicapped academic teaching and in orientation and mobility was taken concurrently. ID 322 consisted of approximately fifty hours of individualized blindfold work for each dual student with Mr. Crouse. Academic practicums were provided in the public school programs of Colorado. A summer program for blind high school students at the Colorado School for the Deaf and Blind was the site for the orientation and mobility practicum. With the average graduate course load at U.N.C. being 15 quarter hours, it should be noted that frequently dual-competency students were expected to take a heavier than normal load.

Evaluation of Pilot Training Model

Report of Evaluation Committee Meeting for Special Project Visually Handicapped, Orientation and Mobility, May 24-25, 1971.

The meeting met at 1:00 p.m. on May 25, 1971. Present were:

John Best, Coordination of Special Education
Region XIX, Service Center
El Paso, Texas

Donald Blasch, Director
Institute of Blind Rehabilitation
Western Michigan University
Kalamazoo, Michigan

Wilber Fulker, Principal
Colorado School for the Deaf and Blind
Colorado Springs, Colorado

C. Edward Ronayne, Director
Special Education Services
Poudre School District, R-1
Fort Collins, Colorado

Berdell Wurzburger
Special Education Department
San Francisco State College
San Francisco, California

Mr. Robert Crouse, Project Director
Orientation and Mobility
University Northern Colorado
Greeley, Colorado

The committee agreed on the fact that the four university students participating in the project were of good quality and will be assets to the field of teaching the visually handicapped.

The committee also felt that the end objective of the dual-training program is a worthy one and should be continued.

The evaluation committee made several recommendation to aid the development of the dual-training program. The recommendations were a result of their observations and interviews with the students and faculty. The recommendations were as follows:

1. The committee recommends that the program definitely be extended to five quarters and that the two teaching practicums be completed during the fourth and fifth quarters.

2. The program needs to re-evaluate the content of the two teaching methods courses, "Elementary Methods" and "Secondary Methods", to eliminate repetition of course content.

3. The program needs to schedule more elective courses that deal with other exceptionalities, i.e., mental retardation, physically handicapped, deaf and hard of hearing.

4. The program needs to strengthen its work in giving the students skills in teaching activities of daily living. Also, more work is needed in the areas of interpersonal relationships with other teachers, staff, administrators, and especially parents.

5. More field visits need to be scheduled to give the student an opportunity to observe first hand a variety of agencies and institutions serving the visually handicapped in different settings.

6. Superivising teachers during the practicum situations need to submit written reports more frequently and on a scheduled basis.

7. The students need more practical work in the academic areas whether in the University Laboratory School or elsewhere before they begin the full-time practicum.

8. The instruction in mobility for low vision children, use of low aids and concept development needs to be scheduled earlier in the program.

A lengthy discussion centered around the fact that four student's opinions were that they felt better prepared and more interested in teaching orientation and mobility than they did teaching academic classroom subjects. Possible reasons for these feelings were explored. First, they could be due to the fact that the one to one relationship found in mobility coupled with visible daily progress as a result of training lends one to be more fully motivated and interested in this part of teaching in the dual role. The progress in the academic areas tends to be much more gradual and spread out over a longer period of time. Second, the students in the past year were obtaining practical experience with visually handicapped students in mobility much earlier than they did in academic teaching. This alone could have accounted for their higher motivation in mobility. Third, in teaching orientation and mobility there are definite methods and procedures to present to the visually handicapped students. These methods apply in specific situations and types of environments. While there are many similar applications in the academic areas, they tend to be more general in nature and there are also so many and varied subject areas to prepare to teach. Hopefully, earlier and more

intensive practical experience in teaching the academic subjects will alleviate the problem and lend to equal motivation and confidence in teaching mobility and academics.

Employment Placement of Graduates of Pilot Training Model

Graduates of the Pilot Training Model were as follows:

	POSITION	EMPLOYER
1.	Itinerant Teacher V.H. and Mobility	School District 6, Greeley, Colorado
2.	Mobility Instructor	Texas School for the Blind Austin, Texas
3.	Mobility Instructor	New Mexico School for the Visually Handicapped Alamogordo, New Mexico
4.	Mobility Instructor	Albany Association for the Blind Albany, New York

PHASE III

Prototype I Training Model

In an effort to strengthen the visually handicapped academic portion of the teacher training program, a third faculty member, Dr. Dean Tuttle, joined Dr. Napier and Mr. Crouse on the visually handicapped area faculty. The abacus was introduced into the curriculum. Mr. Crouse developed a special project on low vision evaluation and assessment of orientation and mobility clients.

As a result of the experiences with the Pilot Training Model and based upon the recommendation of the Evaluation Committee, the following changes were also made:

1. Hands-on experience with visually handicapped children was required as part of the methods course work.
2. Supervision of practicum included more frequent reporting of the graduate student's progress.
3. The dual-competency program was extended to five quarters.
4. Provision within the five quarter program was made for additional electives to be taken in other areas of special education.

SUMMER QUARTER, 1971		Credit Hours	
EDSE 600	Introduction to Graduate Study	3	
EDSE 540	Survey of Education of the Visually Handicapped	3	
EDSE 543	Beginning Braille	3	
EDSE 602	Education & Psychology of Exceptional Children	3	
EDSE 622	Individual Study: Independence in Orientation & Mobility	3	
FALL QUARTER, 1971			
EDSE 544	Elementary Methods for the Blind	3	
EDSE 606	Principles & Practices of Measurement of the Handicapped	3	
EDSE 601	Practicum: Methods of Teaching Orientation & Mobility	3	
EDSE 643	Advanced Braille	3	
EDSE 501	Cranmer Mathematics for the Blind	1	OR
EDSE 501	Workshop: Motor Skills Development	1	

WINTER QUARTER, 1972

EDSE 302	Counseling Parents of Exceptional Children	3
EDSE 641	Structure and Function of the Eye	3
EDSE 545	Secondary Methods for the Blind	3
EDSE 542	Principles of Education of the Partially Seeing	3
EDSE 601	Practicum: Methods of Teaching Orientation and Mobility	3
EDSE	Elective	

SPRING QUARTER, 1972

EDSE 644	Practicum with Visually Handicapped (with an emphasis on teaching academics)	12
EDSE 646	Multi-Impaired Blind Child	3

SUMMER QUARTER, 1972

EDSE 644	Practicum with Visually Handicapped (with an emphasis on teaching orientation and mobility)	12
EDSE	Elective	3

Four students were selected as participants in the Prototype Training Model I. Three had had previous teaching experience in the regular grades ranging from two to three years. One student was selected who did not have prior teaching experience.

Again, the dual students represented a third of the total number of graduate students enrolled in the visually handicapped teacher training program. Appraisal of Exceptional Children and Remediation of Motor-Perceptual Problems were among the popular electives. Some of the blindfold work was videotaped for self-evaluation purposes. The summer practicum in orientation and mobility was made easier as the summer program for blind high school students was transferred to the U.N.C. campus.

The two full-time practicums (one in academics and the other in mobility) were weighted as to the percentage of time spent in itinerant teaching and mobility instruction. Due to the schedule of the public school academic year, the practicum in classroom teaching was scheduled for a higher percentage of time in academics (usually 75 percent). The summer practicum in orientation and mobility scheduled the student for 75 per cent in that and 25 percent in academics and skills of personal management.

Evaluation of Prototype I

The following report is a summary of the Evaluation Committee's visitation held at the University of Northern Colorado. The summary was formulated after receiving information prior to the visitation, interviewing graduates of the program via a conference telephone meeting, interviewing present students in person, with videotapes of their performance being made available, and talking with university faculty regarding future proposed program changes.

The Evaluation Committee members were:

John P. Best, Coordinator of Special Education
Region XIX, Service Center
El Paso, Texas

Donald Blasch, Director
Institute of Blind Rehabilitation
Western Michigan University
Kalamazoo, Michigan

Wilbert Fulker, Principal
Colorado School for the Deaf and Blind
Colorado Springs, Colorado

C. Edward Ronayne, Director
Special Education Services
Poudre School District, R-1
Fort Collins, Colorado

Donald Walker, Associate Professor
University of Virginia
Special Education Department
Charlottesville, Virginia

Burdell Wurzburger
Special Education Department
San Francisco State College
San Francisco, California

Mr. Robert Crouse, Project Director
Orientation and Mobility
University Northern Colorado
Greeley, Colorado

Recommendations

1. There is a need to develop further a list of program objectives stated in behavioral terms, including such factors as conditions and time limits where appropriate, and especially inclusion of criteria for acceptable performance.

2. There is a need to depict the course or program component wherein experiences leading to exact objectives are provided.

3. It is recommended that there be development of evaluation procedures which will permit evaluation and modification of process, as well as, product variables, while the training program is going on.

4. While students are involved in program change, it is recommended the staff utilize in a more systematic manner the skills of the students in evaluation and modification of the curriculum, along with the input of faculty, supervising teachers, and outside evaluators

5. It is recommended that a formal training program for practicum supervisors be implemented with the purpose of relating objectives of the practicum, sequencing of experiences, conferences, understanding evaluation procedures, and instruments.

6. There is a need to consider the use of modular or mini-courses as an alternative for the curriculum design, to provide greater flexibility in meeting needs of students: e.g., abacus, specifics of daily living skills, assessment, etc.

7. There is a need to expand the use of micro-teaching, using videotapes as a means of providing pre-practicum experiences in specific teaching techniques or methods, particularly in academics.

8. It is recommended that the faculty develop specific behavioral criteria for recommendation for endorsement by the University.

9. It is recommended the eye course be re-designed, to provide more educational input and to provide for additional emphasis on training in assessment for, and use of, low vision aids.

10. There is a need to add experiences through mini-courses or modules, more behavior modification techniques, counseling parents, and learning how to relate with other professionals.

11. There is a need for more extensive experiences related to:

    a. general special education
    b. other areas of exceptionality: emotionally disturbed, mentally retarded, learning disabled, and crippled, orthopedic and other health impaired.
    c. multiply handicapped children.

12. It is recommended that the necessity for taking an academic course during the practicum periods be eliminated.

13. It is recommended that there be increased experiences relevant to mobility for low vision persons.

14. It is required that the program be prepared to submit during the Spring Quarter, 1973 some objective evaluation of program effectiveness and in terms of achievement of objectives. This document will be considered by the Evaluation Committee prior to the date of the next on-site visitation.

15. The Evaluation Committee strongly recommends that the program be continued and if possible expanded with the present level of support in terms of student-faculty ratio.

Commendations

The Evaluation Committee commends the program for:

1. Establishment of a program of interrelated study, including a heavy mobility component in a program for training teachers of visually handicapped children.

2. Use of a competency-based curriculum design, including preparation for work in a variety of settings.

3. Recruitment of students who are of high ability, dedication, and maturity.

4. Integration of skill development and practical application in regards to program, especially in the mobility portion of the program.

5. Staff flexibility and attitudes, as shown by utilization of a wide variety of resources for practicum, ranging over a large geographic area, including residential and day facilities, and a wide age range of pupils.

6. Taking an imaginative approach to the problem of meeting the needs of handicapped children in sparsely populated areas.

7. The use in the training program of a variety of media, particularly the use of videotapes.

8. Training personnel in skills which can be applied in conducting related in-service training programs for all persons who have responsibility for working with visually impaired children.

9. Development of high levels of competencies in such specific skills as evaluation of mobility needs and competencies, teaching orientation and mobility techniques, and the ability to read and write braille.

10. Development among students in the program of a high level of professional integrity and enthusiasm.

11. Encouragement of students to have constant in-put to the process of program evaluation and modification.

12. Responsiveness to constructive criticism and recommendations, as shown by both the manifested improvements in the curriculum, and anticipated changes as a result of the evaluation process.

13. The effectiveness of the format of the on-site evaluation, particularly the use of videotape presentations, and conference telephone interviews with last year's students.

14. The addition of an appropriately qualified individual to the faculty and the resulting strengthening of the training program.

15. A special commendation is given to the University administration for encouraging the local public school district to operate the special education program in the Laboratory School.

It should be noted that the report is divided into two categories, commendations and recommendations. The former pertains to comments on the strong features of the program while the latter concerns the recommendations for change needed in program content and presentation to overcome program deficiencies as seen by the Evaluation Committee.

Employment Placement of Graduates of Prototype I

The four graduates of the Prototype I Training Model were as follows:

	POSITION	EMPLOYER
1.	Mobility Instructor	North Central Vocational Technical Institute Wausau, Wisconsin
2.	Itinerant Teacher V.H. and Mobility Instructor	Adams County District 12 Northglenn, Colorado
3.	Resource Teacher V.H. and Mobility Instructor	Denver Public Schools
4.	Itinerant Teacher V.H. and Mobility Instructor	South Metropolitan Association for Low Incidence Handicaps Homewood, Illinois

Prototype II Training Model

In response to some self-evaluations and in response to the evaluation team's recommendations, some extensive revisions were undertaken. Dr. John Schneider, curriculum specialist

from Ohio State University, was added to the faculty of the University of Northern Colorado School of Special Education and Rehabilitation to assist in major program re-development efforts toward a competency based curriculum. The components of the re-development efforts for each course were course goals, specific behavioral objectives, specific learning activities, materials required, and evaluation procedures. Major revisions were made in the visually handicapped course work in an effort to become more specific and in an effort to reduce redundency. Courses on Community Resources for the Visually Handicapped and on Techniques of Daily Living for the Visually Handicapped were introduced into the program. Other program changes included:

1. Evaluation procedures for each course were instituted.
2. A training seminar was provided all prospective supervising teachers of practicum students.
3. The necessity for course work during a practicum was eliminated.

As a result of the experiences obtained with Prototype I and based upon the recommendations of the Evaluation Committee, the curriculum for the five quarter program Prototype of 1972-1973 was as follows:

SUMMER QUARTER, 1972		Credit Hours
EDSE 540	Community Resources for the Visually Handicapped	3
EDSE 600	Introduction to Graduate Study	3
EDSE 606	Principles & Practices of Measurement of Handicapped	3
EDSE 645	Principles of Orientation and Mobility for the Blind	3
EDSE 622	Individual Study: Independence in Orientation and Mobility	3

FALL QUARTER, 1972

EDSE 643	Braille and Other Communication Skills (I)	3
EDSE 601	Practicum: Advanced Orientation and Mobility	3
EDSE 544	Media and Methods for Education of the Visually Handicapped (I)	3
EDSE 602	Education and Psychology of Exceptional Children	3
EDSE 302	Counseling Parents of Exceptional Children	3
EDSE 541	Techniques of Daily Living for the Visually Handicapped	1

WINTER QUARTER, 1973

EDSE 643	Braille and Other Communication Skills (II)	3
EDSE 601	Practicum: Advanced Orientation and Mobility	3
EDSE 641	Structure and Function of the Eye	3
EDSE 646	The Multi-Impaired Blind Child	3
EDSE 642	Low Vision, Its Educational Implications	3
EDSE 545	Media and Methods for Education of the Visually Handicapped (II)	3

SPRING QUARTER, 1973

EDSE 644	Practicum with the Visually Handicapped	12
EDSE 622	Seminar in Teaching the Visually Handicapped	3

SUMMER QUARTER, 1973

EDSE 648	Practicum in Orientation and Mobility	12
EDSE	Elective	3

Robert J. Crouse left the project in March of 1973 to become the Executive Director of the Atlanta Area Services for the Blind, Inc. Mr. David Kappan assumed the responsibility as project director, having had experience as a mobility instructor, as a supervisor of an orientation and mobility program, and as a college faculty member in orientation and mobility. Several changes were enacted during the remaining portion of the project in an attempt to continue the pattern of development which Mr. Crouse had established. The following modifications were established prior to August 31, 1973:

Several program changes were introduced during the final two quarters of the Prototype Training Program for Teachers of the Visually Handicapped (Dual-Competency): 1) the length of time spent under blindfold conditions was extended from one to two quarters. (approximately 80 hours) It was surmised that the additional time was necessary to help create a better understanding of the blind individual in his encounter with orientation and mobility problems. The increase also reflected an alignment with other nationally recognized University training programs in orientation and mobility in regard to time allocated to the acquisition of competencies for prospective instructors. 2) a larger number of students is now being admitted on a rotating basis. It is projected that this will provide more dual-competency teachers as the demand continues to increase. It will also help minimize the problems involved in locating appropriate sites for practicum teaching experiences. 3) assigned course numbers and more descriptive course names have been introduced to help the student in initial program planning. Specific numbers for some courses will alleviate the need for preparing written documents and papers when they are not timely.

Evaluation of Prototype II

The final meeting of the Project Advisory Committee took place in July of 1973. The following report is a summation of findings during their evaluative process.

The Evaluation Committee members were:

John P. Best, Director
Special Education Division
Region XIX Education Service Center
El Paso, Texas 79997

Donald Blasch, Director
Institute for Rehabilitation of the Blind
Western Michigan University
Kalamazoo, Michigan

Wilber Fulker, Principal
Colorado School for the Deaf and Blind
Colorado Springs, Colorado

C. Edward Ronayne
Director Special Education
Fort Collins, Colorado

Donald Walker
Department of Education for Exceptional Children
University of Virginia
Charlottesville, Virginia

Berdell Wurzburger
Associate Professor of Education
San Francisco State College
San Francisco, California

David L. Kappan, Project Director
Orientation and Mobility
University Northern Colorado
Greeley, Colorado

Introductory Remarks

This committee has been closely associated with the project from its inception and wishes to commend the University of Northern Colorado for undertaking this important work. The project has clearly proven the value and feasibility of the dual certification approach and the quality of project implementation has been outstanding throughout. The highest commendations are well deserved by the various professional staff members who have been associated with the operational

aspects of the project: Mr. Robert Crouse, Mr. David Kappan, Dr. Grace Napier, and Dr. Dean Tuttle.

Project Review Procedure

The committee organized its efforts according to the following schedule for the final review of the project. The bulk of the work was completed on the campus of the University of Northern Colorado at Greeley, Colorado.

Sunday, July 15, 1973

- General informal overview of the project through interaction with each other and discussions with a project staff member.

Monday, July 16, 1973

- Review of written reports provided by the project staff.
- Questions to project staff to clarify appropriate points.
- Information requested from Dr. John Schneider regarding performance objective strategies model and evaluation process, both generally and as implemented in the project.
- Conference telephone discussions with students, ex-students, employers, and a former project staff member.
- Interviews with present project trainees.

Tuesday, July 17, 1973

- Review of data gathered.
- In-depth interviews with project staff.
- Preparation of draft report.
- Review of proposed report.
- Development of strategies for finalizing the project report.

All procedures listed were fully implemented and resulted in this final report. It was determined to compress the information into the Commendation and Recommendation sequence which follows:

Recommendations

1. Examine course content in regard to desired task outcome.
2. Examine and consider elements of related special education courses for utilization in meeting competencies for teachers of visually handicapped children.
3. Strengthen general intervention skills in the electives, and examine need for diagnostic techniques.
4. When possible, place interns close enough for logistical ease of supervision (closest reasonable proximity to the campus.)
5. Sensitize potential employers to availability of dual certified staff for educational programs.
6. When possible consider dual practicum experiences.
7. Cooperate with state department in the adoption of standards for certification of orientation and mobility instructors.
8. Increase size of full time mobility staff to meet an obvious need.
9. Establish priorities for the University program implementation related to Colorado House Bill 1164 (49th General Assembly).
10. Any additional staff member should have dual training and experience in the field.

Commendations

1. Student quality is high.
2. The quality of training is superior.
3. There is excellent student/faculty rapport.
4. Prior committee and student recommendations have been implemented.
5. High professional integrity and intensive faculty (and student) dedication permeates the entire program (project and special education school).
6. There is reasonable flexibility to meet student needs, such as rotating entry times and modifying appropriate course content.

7. The entire 600 hour mobility and visually handicapped practicum is of high quality.

8. The program is providing highly needed specialists to accomodate needs identified in the field.

9. The Administration has supported the project concept.

10. There is positive change to enable the practicums to reflect more realistically the dual nature of academic and mobility teaching.

11. Behavioral objectives are developed as a department process.

12. Behavioral objectives already written are well stated and competently developed.

13. An evaluation specialist is used to help in developing adequate behavioral objectives.

14. Internal communication has improved markedly and seems quite good. This is especially relevant during the recent staff change.

15. The doubling of the number of hours of the blindfold experience greatly strengthens the program.

16. The change in personnel teaching orientation and mobility was accomplished with little or no interruption in the program, and the new instructor should be commended for establishing excellent rapport with both students and faculty.

Conclusion

This committee has closely followed the development of the dual training program for several years. The project has demonstrated unquestionable success and is meeting a very important personnel need in the field. The continuation and expansion of this important training program for teachers of the visually handicapped is strongly recommended.

Placement of Graduates of Prototype II

The five graduates of the Prototype II Training Model were placed as follows:

	POSITION	EMPLOYER
1.	Mobility Instructor	Atlanta Area Services for the Blind Atlanta, Georgia
2.	Resource Teacher V.H. and Mobility Instructor	Atlanta Area Services for the Blind Atlanta, Georgia
3.	Itinerant Teacher V.H. and Mobility Instructor	Jefferson County Schools Denver, Colorado
4.	Itinerant Teacher V.H. and Mobility Instructor	Boise Public Schools Boise, Idaho
5.	Itinerant Teacher V.H. and Mobility Instructor	Division of Eye Care and Special Services Bangor, Maine

SUMMARY OF CURRENT EMPLOYMENT STATUS OF DUAL COMPETENCY GRADUATES

The following information pertains to the placement of graduates from the Dual Competency Program. Included are site and type of job responsibilities:

Dual Competency Graduates 1970-1973

Caron, Jan. Weld County School District No. 6 (Greeley). Academics and mobility. K-12. Itinerant/resource.

Carter, Kent D. Amoskeag Center for Educational Services Manchester, New Hampshire. Itinerant teacher, low vision education consultants, mobility specialist.

Carter, Connie (Coffin). Amoskeag Center for the Educational Services, Manchester, New Hampshire. Itinerant teachers, low vision education consultant, mobility specialist.

Cavanaugh, Mary C. First worked for the Albany Association of the Blind (New York), teaching mobility and communication skills. Later worked in the state of Washington. In January 1975 began working for Colorado Services for the Blind, Elderly Blind Project in Greeley, Colorado. Teaches mobility.

Floyd, Jann. First worked in Illinois in a day program teaching both academics and mobility. In January 1975 began working as Assistant Professor at the University of Illinois, Champaign. Serves as supervisor of services to blind university students. Mobility and administration of supportive services, consultant to Champaign Public Schools Visually Impaired Programs.

Harriff, Bill. State of Maine Division of Eye Care, Bangor and Augusta (Maine). Mobility. Itinerant.

Healy, Gene. Texas School for the Blind, Austin, mobility.

Hurd, Cathy (Baumstark). Jefferson County Public Schools, Colorado. Academics and mobility. Itinerant.

Mammel, Terry. South Dakota Rehabilitation Center for the Blind, Sioux Falls. Mobility.

Mayer, Monty. First worked at the New Mexico School for the Blind, Alamogordo. Then left teaching to do ranch management. Is now working for the Idaho School for the Blind, Gooding. He works with visually handicapped children located in the southeastern section of Idaho. Academics and mobility. Itinerant.

McCulloch, Ken. Boise Public Schools, Idaho. Academics and mobility.

Nelson, Daniel. North-Central Technical Institute, Wausau, Wisconsin. Mobility, low vision screening evaluation, communication skills evaluation.

Zaffore, John. Asbury Elementary School, Denver, Colorado. Academics and pre-cane skills. Resource room. K-6.

Dual Competency Graduates 1973-1974

These graduates have been dually prepared but have graduated after the funded special program terminated:

Alberts, Cynthia. Madison Public Schools, Madison, Wisconsin. Resource Teacher for Partially Seeing Students, Glenn Stevens Elementary School. Teaches pre-cane, mobility, and academics. Also works with multi-handicapped children.

Gale, Stanley. Jefferson County Public Schools, Colorado. Academics and mobility, Itinerant, some multi-handicapped children, K-12.

Hughes, Michael. Lighthouse for the Blind, Seattle, Washington. Mobility and communication.

Johnson, Dustin. Oregon School for the Blind, Salem, Oregon. Physical education and mobility.

Newman, Kathleen (Corrigan). State of Maine, Division of Eye Care, Presque Isle. Mobility and academics, itinerant.

Renner, Barbara. Montana School for the Deaf and Blind. Works in the region of Helena. Resource, academics and mobility, parent-counseling, early childhood education.

Werner, Rita. Colorado School for the Deaf and Blind, Colorado Springs. Mobility K-12.

Witter, David. Atlanta Area Services for the Blind, Atlanta, Georgia. Mobility.

Zimbelman, John. Madison Public Schools, Madison, Wisconsin. Academics and mobility, itinerant.

Location of the Twenty-Two Graduates from the Dual-Competency Program

Colorado	6
Georgia	1
Idaho	2
Illinois	1
Maine	2
Montana	1
New Hampshire	2
Oregon	1
South Dakota	1
Texas	1
Washington	1
Wisconsin	3
Unknown	1

Of the number above, ten graduates are employed in the Rocky Mountain Region. Six graduates out of the twenty-two (27.3 percent) work in Colorado. Fifteen of the twenty-two are employed in dual capacities, with several others indicating responsibilities beyond simply mobility. Twenty-two dually prepared graduates constitute thirty-three percent of the sixty-six students graduating during the same time period from the University of Northern Colorado's program in Education of the Visually Handicapped.

UNIVERSITY RESPONSE TO THE TERMINATION OF THE SPECIAL PROJECT

Funding for the development of a prototype training model for the preparation of dual-competency teachers of visually handicapped children terminated August, 1973. An average of four students were trained each of the three years of the project. Substantial student aid was made available to encourage students to participate in this new adventure. The project director's salary was completely covered by the grant as well as other program necessities such as materials, supplies, travel, etc. This was a heavy investment of time, energy, and money in the training of a limited number of students.

At the conclusion of the project, three issues had to be resolved. First, a determination had to be made as to the efficacy of the dually-competent teacher concept. Second, consideration had to be given as to the effectiveness of the training model that had been developed. If the resolution of the first two issues were positive, then some determination as to the continuation of the program under the University of Northern Colorado sponsorship had to be made.

The resolution of the first two issues was, in fact, positive. The success of the graduates, the response from

instructor to the faculty, half of the twenty-four students would be able to receive dual training. The university is seriously considering this possibility for the future.*

* Approval was given summer of 1974 to hire a second mobility faculty member.

FINAL PROTOTYPE COURSEWORK

GENERIC REQUIREMENTS		CREDIT HOURS	
EDSE 600	Introduction to Graduate Study	3	OR
EDSE 689	Interpretation and Evaluation of Behavioral Research	3	
EDSE 606	Principles and Practices of Measurement of the Handicapped	3	OR
EDSE 504	Appraisal of Exceptional Children	4	
EDSE 602	Education and Psychology of Exceptional Children	3	
EDSE 302	Counseling Parents of Exceptional Children	3	
EDSE 690	Counseling the Handicapped	3	

ACADEMIC REQUIREMENTS		
EDSE 540	Community Resources for Visually Handicapped	3
EDSE 541	Techniques of Daily Living for Visually Handicapped	1
EDSE 642	Low Vision and Its Educational Implications	2
EDSE 543	Braille and Other Communication Skills for the Visually Handicapped (I)	3
EDSE 544	Media and Methods for Visually Handicapped (I)	3
EDSE 545	Media and Methods for Visually Handicapped (II)	3
EDSE 546	Principles of Orientation and Mobility for Visually Handicapped	3
EDSE 641	Structure and Function of the Eye	3
EDSE 643	Braille and Other Communication Skills for Visually Handicapped (II)	3
EDSE 646	Multi-Impaired Blind Child	3
EDSE 644	Practicum with Visually Handicapped: Academic	3-15
EDSE 547	Independence in Orientation and Mobility	3
EDSE 548	Advanced Independence in Orientation and Mobility	3
EDSE 647	Methodology in Teaching Orientation and Mobility	3
EDSE 648	Practicum with Visually Handicapped: Orientation and Mobility	3-15

ELECTIVES

Student's Choice

The dual-competency program involves five quarters of study (approximately fifteen months with minimum of 75 quarter hours).

The following is a brief summary of each of the academic teaching courses which are part of the Dual-Competency Program in the Area of the Visually Handicapped:

EDSE 600: INTRODUCTION TO GRADUATE STUDY. Three hours credit. An orientation to graduate study in general and the nature and methods of research in particular. Required of all first-year graduate students (except for those deparments which have substitutes for this course). Should be taken during the first quarter of graduate work.

EDSE 689: INTERPRETATION AND EVALUATION OF BEHAVIORAL RESEARCH Three hours credit. Course is designed to provide graduate students the necessary skills for interpretation and evaluation of research in the social services. Emphasis on basic concepts, design, and utilization of behavioral research. (Course may be used as a substitute for EDSE 600.)

EDSE 606: PRINCIPLES AND PRACTICES OF MEASUREMENT OF THE HANDICAPPED. Three hours credit. This course is designed to develop an understanding of and the ability to interpret the results of psychological and educational tests. Emphasis on diagnosis and problems encountered in testing children and adults who are visually, acoustically, orthopedically, mentally handicapped or speech impaired.

EDSE 604: APPRAISAL OF EXCEPTIONAL CHILDREN. Four hours credit. A critical examination of objective tests used to appraise the intellectual abilities of exceptional children.

EDSE 602: EDUCATION AND PSYCHOLOGY OF EXCEPTIONAL CHILDREN. Three hours credit. A survey of the characteristics and educational needs of impaired and gifted children. Designed as an overview of the field for graduate students in special education, general education, psychology and other related fields.

EDSE 302: COUNSELING PARENTS OF EXCEPTIONAL CHILDREN. Three hours credit. This course is designed to present the techniques of working with parents of special education, general education, nursing, counseling and other related personnel.

EDSE 690: COUNSELING THE HANDICAPPED. Three hours credit. A study of counseling and counseling theories as applied to the handicapped population. An analysis of these theories and how these theories are utilized in the counseling interview is discussed and practiced. Often the rehabilitation counselor's task is one of coordinating the efforts of the team members and bringing together the resources of community agencies which may contribute to the total rehabilitation of an individual.

EDSE 540: COMMUNITY RESOURCES FOR VISUALLY HANDICAPPED. Three hours credit. Designed to acquaint the student with an understanding of the needs for community resources. Provides the student with techniques for evaluating the effectiveness of available resources, and the knowledge and skills required to develop community resources needed for the visually impaired.

EDSE 541: TECHNIQUES OF DAILY LIVING FOR THE VISUALLY HANDICAPPED. One hour credit. Study and use of adapted materials and techniques for teaching to the visually handicapped such skills as grooming, eating, cleaning, cooking, sewing, and simple home repairs.

EDSE 642: LOW VISION AND ITS EDUCATIONAL IMPLICATIONS. Two hours credit. Principles of preparation, selection and effective use of instructional materials for the low vision child. Also includes educational interpretation of eye reports, educational implication of diagnosis, techniques for observation of child's use of vision, visual efficiency testing and training.

EDSE 543: BRAILLE AND OTHER COMMUNICATION SKILLS FOR THE VISUALLY HANDICAPPED (I) Three hours credit. Adaptation and preparation of materials --whether tactual, auditory, visual-- and use of special devices and equipment. These skills are those needed by the teacher rather than how to teach them to children. Two hour lab required.

EDSE 544: MEDIA AND METHODS FOR THE VISUALLY HANDICAPPED (I) Three hours credit. Special instructional techniques in teaching to blind and partially seeing reading and other language arts, mathematics, science, social studies, physical education, and fine arts. Teaching these content areas through use of tactual, auditory, and visual aids. Consideration of needs based on growth and development of visually impaired child. Two hour lab required.

EDSE 545: MEDIA AND METHODS FOR THE VISUALLY HANDICAPPED (II) Three hours credit. Practical aspects of programming for visually handicapped children: evaluation procedures, records, staffings, appropriate placements, sourcing materials and equipment, scheduling, consulting with staff, legislative and financial provision, parent conference, coordination of volunteer services, community agencies and other related services. Two hour lab required.

EDSE 641: STRUCTURE AND FUNCTION OF THE EYE. Three hours credit. An ophthalmologist presents the anatomy and physiology of the eye and procedures for the medical eye examination. An educator presents the functional implications of various pathologies in the educational setting.

EDSE 643: BRAILLE AND OTHER COMMUNICATION SKILLS (II). Three hours credit. Mastery of special braille codes: Mathematical and science notations, music, and foreign languages; textbook formats for braille, large type and recorded transcriptions. Operation and use of Cranmer Abacus. Two hour lab required.

EDSE 646: MULTI-IMPAIRED BLIND CHILD. Three hours credit. A course designed to study characteristics, learning problems, curricular adjustments, and program techniques of blind children with additional disabilities, including cerebral palsied blind, mentally retarded blind, and children with brain damage.

EDSE 644: PRACTICUM WITH THE VISUALLY HANDICAPPED. Maximum of fifteen hours credit. Supervised teaching experience with both blind and partially seeing children; placement evaluations; preparation of materials. Observation of varied programs, including resource room and residential school plans, rehabilitation agencies.

Provided below is a description of the orientation and mobility course work as required for the dual-competency program. It is the portion of the program that was added in association with the established program for preparing academic teachers of the visually handicapped which began at the University of Northern Colorado in 1960.

EDSE 546: PRINCIPLES OF ORIENTATION AND MOBILITY FOR THE VISUALLY HANDICAPPED. Three hours credit. A survey course which relates to the development and components of formalized instruction in independent travel. It is divided into two sections, the first being devoted to the history and background of independent travel relative to the blind and partially sighted. Lectures and discussion on trends, current training programs and program components are included along with information on the various modes of mobility, concept development, and low vision as it relates to orientation and mobility. The second portion or the course deals directly with the basic skills in orientation and mobility such as sighted guide, protective techniques, principles of navigation and methods of familiarization. During this section, students develop competence in utilizing skills by working with a partner while undergoing supervised blindfold experiences. The role of the classroom teacher relative to pre-cane mobility and to the total orientation and mobility process is explored.

EDSE 547: INDEPENDENCE IN ORIENTATION AND MOBILITY. Three hours credit. Designed to provide the student with some degree of insight into the situation of traveling about one's environment without the aid of vision. The student encounters similar physical experiences to the visually impaired person as he goes through a skeletal orientation and mobility course. Under blindfolded conditions, the student learns to utilize a sighted guide, travel independently in familiar indoor areas using protective techniques, gain competence in general navigational skills, and use the processes of familiarization to structure the environment into manageable components of a total area or object. The course stresses detail in physical skills and the use of other sensory information while gaining proficiency in actual performance. As confidence and the patterns of success are developed, the use of a cane is introduced and developed. The student then progresses to the outdoor setting where he is introduced to travel in the residential area. Skills in establishing, maintaining, and recovering a line of travel are developed along with learning to cross streets, to estimate distance and time traveled, and to use landmarks and clues in order to sustain proper orientation in the environment. Forty hours of practicum travel experiences are completed during this course.

EDSE 548: ADVANCED INDEPENDENCE IN OREINTATION AND MOBILITY. Three hours credit. Continuation of the previous course in which the student proceeds with the blindfold experience for an additional forty hours. The total of eighty hours does not represent the same number of instructional hours that the blind person receives, therefore the university student often must spend a great deal of his own time in practicing in order to gain the ability that he will need to successfully encounter the advanced travel situation found during this course. The student blends into more complex areas which require him to cross streets with traffic lights, navigate in situations marked by heavy vehicular traffic, and deal with commercial facilities that are located in a semi-business district. Further training extends into the larger business areas in which skills in dealing with the sighted public become important. Use of public transportation, functioning in business establishments, and transferring general principles to new areas are several of the components of the advanced travel situation. The final sessions of the quarter are spent negotiating conditions unique to large metropolitan areas; facilities in Denver are included in this phase of training.

EDSE 647: METHODOLOGY IN TEACHING ORIENTATION AND MOBILITY Three hours credit. A course geared toward providing the student with practicum experiences in teaching independent travel skills to a visually handicapped person on an individualized basis. Supervision by the university instructor is provided

while the student works with a visually handicapped person on campus or in the community. Methods, materials, and teaching techniques are stressed in addition to proper reporting and record keeping procedures. Cooperation with local community agency resources and with visually impaired student from the University of Northern Colorado is maintained for this mutually beneficial arrangement.

EDSE 648: PRACTICUM IN ORIENTATION AND MOBILITY. Maximum fifteen hours credit. Full-time student teaching experience which extends for one quarter. The practicum student is placed with a master teacher who is certified in teaching Orientation and Mobility. The first week or two is spent in becoming familiar with agency or school policies and procedures, in observing the master teacher, and in getting to know the students and their particular situations relative to mobility. The practicum student is gradually given his own students to instruct while he maintains a close association with his supervisor. As the quarter continues, he assumes more responsibilities, both in teaching and in a professional role. He will become involved in staff and faculty meetings, observe other instructors and areas and will visit other local resources for the education and rehabilitation of the visually handicapped. Practicum sites in the Rocky Mountain region are generally used, although other regions have also served as cooperating facilities on occasion.

SUMMARY

The special projects programs involved a developmental approach to the formulation of a Prototype Training Program for Dual-Competency Teachers of the Visually Handicapped. As a direct result of these special projects, thirteen dual-competency teachers graduated with equal and full skills as teachers of the visually handicapped and mobility instructors. Six other students began their programs to prepare as dual-competency teachers of the visually handicapped and were still in training at the time of the writing of this report. One student began the program but did not complete the training.

The Prototype Program was developed over four years and is the final product formulated on experiences with earlier prototypes each of which was evaluated by students, faculty, and an outside evaluation team.

It is concluded that a five academic quarter program is necessary in order to prepare the dual-competency teacher fully in both the teaching of academic related areas and in the instruction of orientation and mobility. It is essential that students being selected into the five quarter program have backgrounds and training in education. Minimally, the

student should have at least a B.A. in education, preferrably elementary education. Students who entered into the program at the University of Northern Colorado without undergraduate training in education were held for deficiencies in those areas, extending their programs to six and seven quarters of study.

Some problems were encountered in the preparation of teachers in the dual role of teaching academics and mobility. Some students became more interested in teaching mobility over teaching academic skills. This was particularly true with graduates of the Pilot Training Model where three of the four graduates chose employment as mobility instructors over itinerant teachers of the visually handicapped. This fact was reversed with the second group of graduates where three out of four chose employment where they could use their skills in both academic teaching and mobility.